
	<p style="text-align: center;">Cooperative Institute For Climate Applications And Research</p> <p style="text-align: center;">Lamont-Doherty Earth Observatory Columbia University 61 Route 9W Palisades, NY 10964 845-365-8669 Dr. Yochanan Kushnir, Director</p> <p style="text-align: center;">http://www.ldeo.columbia.edu/cicar/</p>	
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The Cooperative Institute for Climate Applications and Research (CICAR) at Columbia University, New York was established in July 2003 and is the newest NOAA Cooperative Institute. CICAR provides collaborative work in Earth System History modeling and analysis research, application, and education between researchers at the Lamont-Doherty Earth Observatory (LDEO) and the Earth Institute (EI) at Columbia University and the NOAA Geophysical Fluid Dynamics Laboratory (GFDL) in Princeton, New Jersey.

CICAR's research themes are aligned to achieve three goals: (1) **Earth System Modeling** – Improve the capability to predict ENSO and to make that capability as usable as possible to the forecasters at application centers, such as the International Research Institute for Climate Prediction (IRI) and the National Centers for Environmental Prediction (NCEP); (2) **Modern and Paleoclimate Observations** - Develop, collect, analyze, and archive instrumental and paleoclimate data; and (3) **Climate Variability and Change Applications Research** - Develop tools and methods that provide useful climate and climate change information to support impact assessments and decision making in the areas of health, policy, water resources, and agriculture.

CICAR scientists publish 39 scientific publications annually, of which 96% appear in peer-reviewed publications. CICAR research includes climate modeling development activities that enrich the numerical tools and modeling scenarios accessible to GFDL and LDEO scientists, thus advancing climate research at both NOAA and Columbia University. LDEO and GFDL scientists use these models to explore the climate evolution from the medieval period to the modern industrial age with the goal of putting present and future climate change in the context of past natural variability. This initiative emphasizes research done by graduate students and postdoctoral research scientists. In addition, armed with the modern and paleoclimate data scientists expect to better understand the Earth's climate history and to develop scenarios that can be tested using climate models. Some of the research is multidisciplinary, such as, the LDEO project ARCHES (AbRupt Climate CHange Studies) and the tree-ring based, North American Drought Atlas sponsored by NOAA. Research includes collaboration with other Columbia scientists who study the impact of climate variability and change on society and ways to improve communication between climate scientists and stakeholders around the world. CICAR provides the opportunity to address a broad spectrum of climate applications from those related to seasonal, interannual, and decadal climate variability.

CICAR's research supports NOAA's Mission Goal to Understand climate variability and change to enhance society's ability to plan and respond.

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